LISTING OF CLAIMS:

1-15 (Cancelled)

16. (Currently Amended) A method for performing hand-off of a mobile station in a cellular system or wireless local loop that includes a smart antenna system of plural sector antennas, comprising the steps of:

recording signal strengths received at one or more of the plural sector antennas from the mobile station;

calculating the rates of signal changes from the recorded signal strengths;

assessing the movement of the mobile station based on the calculated rates of signal changes;

determining when signal strength received at one antenna from the mobile station reaches a predetermined threshold; [[and]]

~~performing~~ selecting a hand-off ~~of the mobile station~~ when reaching of the predetermined threshold is so determined, ~~wherein at least one aspect of~~ wherein:

the selecting comprises selecting one of: a hand-off ~~is controlled in response to~~ between two different sector antennas, a hand-off between two different serving sectors, and a hand-off between two adjacent cells, and

the selecting is based on the assessment of the movement of the mobile station based on the calculated rates of signal changes; and

performing the selected hand-off of the mobile station.

17. (Cancelled)

18. (Currently Amended) The method according to claim [[17]] 16, wherein the step of assessing the movement includes the step of:

determining if the rate of change is indicative of tangential motion across an antenna sector or is indicative of radial motion within an antenna sector.

19. (Previously Presented) The method according to claim 16, wherein the step of determining when signal strength reaches a predetermined threshold further comprises the steps of:

determining when signal strength received at the one antenna from the mobile station reach reaches a first predetermined threshold;

performing processing operations in preparation for hand-off; and

determining when signal strength received at the one antenna from the mobile station reaches a second predetermined threshold.

20-25 (Cancelled)

26. (Currently Amended) A computer readable medium bearing instructions for performing hand-off of a mobile station in a cellular system that includes a smart antenna system of plural sector antennas, said instructions being arranged to cause one or more processors upon execution thereof to perform the steps of:

recording signal strengths received at one or more of the plural sector antennas from the mobile station;

calculating the rates of signal changes from the recorded signal strengths;

assessing the movement of the mobile station based on the calculated rates of signal changes;

determining when signal strength received at one antenna from the mobile station reaches a predetermined threshold; [[and]]

~~performing~~ selecting a hand-off ~~of the mobile station~~ when reaching of the predetermined threshold is so determined, ~~wherein at least one aspect of~~ wherein:

the selecting comprises selecting one of: a hand-off ~~is controlled in response to~~ between two different sector antennas, a hand-off between two different serving sectors, and a hand-off between two adjacent cells, and

the selecting is based on the assessment of the movement of the mobile station based on the calculated rates of signal changes; and

performing the selected hand-off of the mobile station.

27. (Previously Presented) A computer readable medium bearing instructions for performing location finding of a mobile station in a cellular system that includes a smart antenna system of plural sector antennas along with a cell-site signal coverage profile, said instructions being arranged to cause one or more processors upon execution thereof to perform the steps of:

recording signal strengths received at one or more of the plural sector antennas from the mobile station;

calculating the rates of signal changes from the recorded signal strengths;

assessing the movement of the mobile station based on the calculated rates;

predicting the mobile station's movement based on the received signal strengths, and

determining the location of the mobile station by comparing the received signal strength from at least one sector antenna against the cell-site signal coverage profile along with its predicted movement.

28-29 (Cancelled)